

NASA examines threatening tropical disturbance in eastern Caribbean Sea

August 25 2016, by Rob Gutro / Hal Pierce

NASA analyzed the rainfall and cloud heights in an area of low pressure designated as System 99L that bringing rains and gusty winds to Puerto Rico, Hispaniola, Turks and Caicos and other islands in the Atlantic Ocean and northeastern Caribbean Sea today, Aug. 25.

On Aug. 25 at 3:16 a.m. EDT (0716 UTC) the Global Precipitation Measurement mission or GPM core observatory satellite had an excellent look at an area of low pressure associated with a tropical wave moving past the northern Dominican Republic.

The National Hurricane Center (NHC) has been monitoring this area of disturbed weather for potential development into a tropical cyclone. This low pressure area is predicted by the NHC to produce heavy rainfall as it continues moving toward the northeast. The development of a tropical storm or hurricane moving in this direction could pose future danger to the Bahamas and the southeastern United States.

Rainfall data derived from data captured by the GPM satellite's Microwave Imager (GMI) and Dual-Frequency Precipitation Radar (DPR) instruments showed the extent of heavy precipitation in the tropical disturbance. GPM's DPR showed that some extremely powerful thunderstorms northeast of the Dominican Republic were dropping rain at a rate of almost 248 mm (9.8 inches) per hour.

The GPM satellite's radar (DPR Ku Band) was used to create 3-D views of rainfall structure within the violent storms northeast of The

Dominican Republic. DPR revealed that some storm tops in these intense storms were reaching altitudes above 16 km (9.9 miles).

The numbering and (and letters) are simply a code designation that is used to initiate model runs and is used in all basins. At the start of the hurricane season the first disturbance the National Hurricane Center (NHC) wants to run track and intensity models for in the Atlantic would be designated System "90L." They just keep rolling sequentially then restart when 99 reached. When a system is named, the name replaces the 9 designator for identification.

At 8 a.m. EDT the NHC said that "the area of [low pressure](#) associated with a tropical wave was centered just southeast of the Turks and Caicos Islands. The wave is producing gale-force winds over water to the north of Hispaniola, however, satellite images indicate that the shower and thunderstorm activity is well removed from the area of lowest pressure. Surface data also indicate that the low continues to lack a well-defined center."

NHC said that conditions are expected to become a little more favorable for development by the weekend of Aug. 27 and Aug. 28 and this system could become a tropical depression during the next couple of days.

"Regardless of development, heavy rains are likely over Puerto Rico today, and strong winds and [heavy rainfall](#) are likely over portions of Hispaniola, the Turks and Caicos, and the southeastern and central Bahamas during the next couple of days," NHC noted. These rains could lead to flash floods and mudslides.

Residents in the northwestern Bahamas and Florida should monitor the progress of this disturbance since it is increasing likely that some impacts, at a minimum heavy rains and gusty winds, will occur beginning this weekend.

The NHC gives System 99L a medium chance to develop into a depression in the next two days and a high chance through 5 days.

Provided by NASA's Goddard Space Flight Center

Citation: NASA examines threatening tropical disturbance in eastern Caribbean Sea (2016, August 25) retrieved 7 May 2024 from <https://phys.org/news/2016-08-nasa-threatening-tropical-disturbance-eastern.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.